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1. A method of identifying a failed device in a network that includes plural devices, comprising:
attempting to communicate with a target device;
determining if the target device has an active
5 neighbor if the attempt to communicate with the target
device fails; and
identifying the target device as a failed device if
the target device has an active neighbor.

10 2. A method according to claim 1, wherein the
attempting comprises sending a packet to the target device
and waiting for a response from the target device.

15 3. A method according to claim 1, wherein:
the determining comprises attempting to communicate
with a neighbor of the target device; and
the neighbor is determined to be active if the
attempt to communicate is successful.

4. A method according to claim 1, further
comprising locating a neighbor of the target device.

20 5. A method according to claim 4, wherein the
locating comprises:
generating a neighbor table for the network; and
consulting the neighbor table to locate the neighbor
of the target device.

25 6. A method according to claim 5, wherein the
generating comprises:
polling the target device;
receiving a response from the target device; and

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constructing the neighbor table based on the response.

7. A method according to claim 6, wherein:
the polling is performed periodically; and

5 the method further comprises updating the neighbor table based on the periodic polling.

8. A method according to claim 6, wherein:
the response comprises a network address of the neighbor; and

10 the neighbor table indexes the target device to the network address of the neighbor.

9. A method according to claim 8, wherein the target device:

stores a Management Information Base (MIB) II table
15 containing the network address of the neighbor; and
prepares the response based on the MIB II table.

10. A method according to claim 1, wherein the target device comprises a router or a switch, and the neighbor comprises a router, a switch, or a computer.

20 11. A method of identifying a failed device in a network that includes plural devices, comprising:
generating a neighbor table for the devices based on information provided from the devices; and
sending a packet to a target device to determine if
25 the target device is active;
wherein, if the target device is not active, the method further comprises:

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locating a neighbor of the target device using
the neighbor table;
sending a packet to the neighbor to determine
if the neighbor is active; and
5 identifying the target device as a failed
device if the neighbor is active.

12. An apparatus for identifying a failed device in
a network that includes plural devices, comprising:
a memory which stores executable code; and
10 a processor which executes code (i) to attempt to
communicate with a target device, (ii) to determine if the
target device has an active neighbor if the attempt to
communicate with the target device fails, and (iii) to
identify the target device as a failed device if the target
15 device has an active neighbor.

13. An apparatus according to claim 12, wherein the
processor attempts to communicate with the target device by
sending a packet to the target device and waiting for a
response from the target device.

14. An apparatus according to claim 12, wherein:
the processor determines if the target device has an
active neighbor by attempting to communicate with a neighbor
of the target device; and
the neighbor is determined to be active if the
25 attempt to communicate is successful.

15. An apparatus according to claim 12, wherein the
processor executes code to locate a neighbor of the target
device.

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16. An apparatus according to claim 15, wherein the processor locates the neighbor by:

generating a neighbor table for the network; and consulting the neighbor table.

5 17. An apparatus according to claim 16, wherein the processor generates the neighbor table by:

polling the target device;
receiving a response from the target device; and constructing the neighbor table based on the

10 response.

18. An apparatus according to claim 17, wherein the processor performs the polling periodically and updates the neighbor table based on the periodic polling.

19. An apparatus according to claim 17, wherein:

15 the response comprises a network address of the neighbor; and

the neighbor table indexes the target device to the network address of the neighbor.

20. An apparatus according to claim 12, wherein the target device comprises a router or a switch, and the neighbor comprises a router or a switch.

21. A computer program stored on a computer-readable medium to identify a failed device in a network that includes plural devices, comprising:

25 code to attempt communication with a target device;
code to determine if the target device has an active neighbor if an attempted communication with the target device fails; and

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code to identify the target device as a failed device if the target device has an active neighbor.

22. A computer program according to claim 21, wherein the attempting code sends a packet to the target
5 device and waits for a response from the target device.

23. A computer program according to claim 21, wherein:

the determining code attempts to communicate with a neighbor of the target device; and

10 the neighbor is determined to be active if an attempted communication is successful.

24. A computer program according to claim 21, further comprising code to locate a neighbor of the target device.

15 25. A computer program according to claim 24, wherein the locating code comprises:

code to generate a neighbor table for the network;
and

20 code to consult the neighbor table to locate the neighbor of the target device.

26. A computer program according to claim 25, wherein the generating code comprises:

code to poll the target device;

code to receive a response from the target device;

25 and

code to construct the neighbor table based on the response.

pub A1 > 27. A computer program according to claim 26,
wherein:

the polling code performs the polling performed
periodically; and

5 the computer program further comprises code to
update the neighbor table based on the periodic polling.

28. A computer program according to claim 26,
wherein:

10 the response comprises a network address of the
neighbor; and

the neighbor table indexes the target device to the
network address of the neighbor.

29. A computer program according to claim 21,
wherein the target device comprises a router or a switch,
15 and the neighbor comprises a router or a switch.

~~30. A network system comprising:~~

a first device;

a second device; and

20 a third device located in a path between the first
device and the second device on a network;

wherein the first device comprises:

a memory which stores executable code; and

25 a processor which executes code (i) to send a
packet to the second device to determine if the
second device is active, (ii) if the second device
is not active, to send a packet to the third device
to determine if the third device is active, and
(iii) to identify the second device as a failed
device if the third device is active.

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31. A network system according to claim 30, wherein
the first device comprises a computer, the second device
comprises a switch or a router, and the third device
comprises a switch or a router.